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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,807	02/15/2005	Josephe J Keenan	BA9309USPCT	1657

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EXAMINER

SULLIVAN, DANIELLE D

ART UNIT	PAPER NUMBER
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1616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,807	Applicant(s) KEENAN ET AL.	
	Examiner DANIELLE SULLIVAN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-17 are pending. New claims 18-37 were added in the amendment filed 01/30/2008.

Withdrawn rejections

Applicant's amendments and arguments filed 01/30/2008 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below is herein withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971', in view of Riebel et al. (US 5,270,288) and Nonomura et al. (US 6,258,749).

Applicant's Invention

Applicant claims a process of preparing a paste-extruded sulfonamide herbicide, which comprises (2 to 90%) one or more of the free acid form of a sulfonamide

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herbicide (not salts), (0 to 95%) one or more additives, base (50 -100 equivalent %) and sufficient water to form a paste (page 2, line 34-page 3, line 11). The mixture is extruded and dried. Preferably the base is sodium carbonate or sodium phosphate in the dodecahydrate form and the sulfonamide herbicide is thifensulfuron-methyl, tribenuron-methyl or sulfometuron-methyl. The composition comprises from about 0.5 to about 50% by weight of a saccharide.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

'971' teaches process for preparing a rapidly disintegrating water-dispersible granular composition, comprising extruding a premix through a die or screen at elevated temperature without using any water (column 1, lines 37-38 and 56-59). However, granules are also taught as being made by adding water to form an extrudable wet mix, breaking the product into granules and the optionally drying (column 1, lines 24-27).

'971' teaches a process comprising extruding a dry premix comprising by weight (0.01-90%) of one or more active ingredients, (1-60%) one or more diluents, (0-30%) binders and two or more additives (ranging 0-80%) through a die to form granules (column 4, lines 25-45). The active ingredients includes sulfonamides, such as sulfometron-methyl (column 10, Table 1, Compound No. 63). '971' also teaches sodium and ammonium phosphates and sodium and potassium carbonates as optional additives/anticaking additive/gas generating agents (column 14, lines 24-26 and 39-40). '971' further teaches conventional methods for preparing water-dispersible granule compositions which includes the **extrusion of a water-wet paste** (column 3, lines 59-

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62). The step of sifting the dried extrudate is not disclosed, but sifting is a step commonly used in processes in order to remove excess dusts and products that are too small in size for retail purposes and '971' teaches that the granules have uniform size (column 1, lines 20-22).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

The addition of a saccharide is not disclosed by '971'. However, '971' broadly discloses the addition of binders and additives within the process. It is for this reason that Nonomura et al. is joined.

Nonomura et al. teaches saccharides as being additives to formulations used to improve plant growth. Nonomura et al. teaches methods and formulations for treating plants and enhancing plant growth (abstract). The use of any polyacylpolysaccharide or polyalkylpolysaccharide and herbicides are disclosed as well (column 8, line 47; column 15, lines 30-33).

'971' does not teach the sulfonamides thifensulfuron-methyl and tribenuron-methyl. However, various other sulfonamides are taught such as, bensulfuron methyl, chlorimuron ethyl and chlorsulfuron (See Table 1, Compounds 4, 9 and 11, column 6). '971' discloses that one or more active ingredients, including herbicides, may be used in combination with other herbicidally active ingredients. It is for this reason that Reibel et al. is joined.

Reibel et al. teaches the combination of arylsulphonylureas with the sulfonamides which includes thifensulfuron-methyl and tribenuron-methyl in formulated pastes (column 1, lines 6-16; column 4, line 32; column 5, lines 57 and 58).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of prepare the composition as a water wet extrudable paste since '971' teaches a process for preparing extrudable water wet pastes and drying the granules. In view of KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) it would have been obvious to try adding water to soften the paste instead of heating it since it would require less energy than heating and is a common method of extrusion. One would have been motivated to formulate a water wet paste by extrusion of a water wet paste when preparing compositions at elevated temperature is not desired.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' with Nonomura et al. to further include a saccharide. One would have been motivated to include a saccharide because saccharides are known to enhance plant growth.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' with Reibel et al. to further include a mixtures the sulfonamides thifensulfuron-methyl and tribenuron-methyl. One would have been motivated to include a thifensulfuron-methyl and tribenuron-methyl because

they are sulfonamides and have a similar core structure and similar function to sulfometuron-methyl and are formulated into pastes.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971'.

Claim 17 is a product-by-process claim. According to MPEP 2113 [R-1], product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Therefore, claim 17 is taught by the cited references.

Applicant's Invention

Applicant claims a sulfonamide herbicide composition (page 3, lines 12 and 13).

Determination of the scope and the content of the prior art (MPEP 2141.01)

With respect to claims 17 of the instant application, '971' teaches a rapidly disintegrating water-dispersible granular composition (column 1, lines 37-38 and 56-59).

'971' teaches a process comprising extruding a dry premix comprising by weight (0.01-90%) of one or more active ingredients, including sulfonamides, such as sulfometuron-methyl (column 10, Table 1, Compound No. 63). Also, (1-60%) one or more diluents, (0-30%) heat activated binders and two or more additives (ranging 0-80%) through a die to form granules (column 4, lines 25-45). '971' also teaches the bases sodium and potassium carbonates (column 14, lines 39-40).

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

'971' teaches preparing the composition by heat extrusion however, a method of preparing compositions by water wet extrusion is disclosed (column 1, lines 23-27).

**Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)**

It would have been obvious to one of ordinary skill in the art at the time of the invention to prepare the composition by water wet extrusion as taught by '971'. In view of KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) it would have been obvious to try adding water to soften the paste instead of heating it since it would require less energy than heating and is a common method of extrusion. One would have been motivated to formulate a water wet paste by extrusion of a water wet paste when preparing compositions at elevated temperature is not desired.

Response to Arguments

Applicant's arguments filed 1/30/2008 have been fully considered but they are not persuasive.

Applicant's arguments with respect to the rejection under 35 U.S.C. 103 (a), as being unpatentable over Sandell et al. (US 5,474,971) in view of Riebel et al. (US 5,270,288) and Nonomura et al. (US 6,258,749) have been considered but are not

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persuasive. Applicant claims that Sandell et al. teaches using a heat extrusion technique and is not meant to apply to extrusion of a water-wet paste. However, extrusion of a water-wet paste is taught by Sandell et al. and therefore in view of KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) it would have been obvious to try adding water to soften the paste instead of heating it since it would require less energy than heating and is a common method of extrusion.

Claim 17 is a product-by-process claim. According to MPEP 2113 [R-1], product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Therefore, claim 17 is taught by Sandal et al. Therefore, the rejections under 35 U.S.C. 103(a) are maintained.

Rejection of new claims 18-37 addressed herein.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "one or more active ingredients that are not sulfonamide herbicides" in reference to the active ingredients comprising at least one sulfonamide herbicide free acid. This is indefinite because the base claim requires a

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sulfonamide herbicide. For purposes of examination, the claim has been treated as comprising any active ingredient.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971' in further view of Sandell (US 5,714,157), herein '157'.

Applicant's Invention

Applicant claims a process of preparing a paste-extruded sulfonamide herbicide, which comprises (2 to 90%) one or more of the free acid form of a sulfonamide herbicide (not salts), (0 to 95%) one or more additives, base (50 -100 equivalent %) and sufficient water to form a paste (page 2, line 34-page 3, line 11). The mixture is extruded and dried and optionally sifted. Applicant also claims the product obtained by the process wherein the sulfonamide herbicide is selected from such herbicides as thifensulfuron-methyl, tribenuron-methyl or sulfometuron-methyl. Preferably, the base is sodium carbonate or sodium phosphate and the sulfonamide herbicide is thifensulfuron-

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methyl, tribenuron-methyl or sulfometuron-methyl. The composition comprises from about 0.5 to about 50% by weight of a disaccharide. Preferably, the mixture comprises two or more active ingredients.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

'971' teaches process for preparing a rapidly disintegrating water-dispersible granular composition, comprising extruding a premix through a die or screen at elevated temperature without using any water (column 1, lines 37-38 and 56-59). However, granules are also taught as being made by adding water to form an extrudable wet mix, breaking the product into granules and the optionally drying (column 1, lines 24-27).

'971' teaches a process comprising extruding a dry premix comprising by weight (0.01-90%) of one or more active ingredients, (1-60%) one or more diluents, (0-30%) binders and two or more additives (ranging 0-80%) through a die to form granules (column 4, lines 25-45). The active ingredients includes sulfonamides, such as sulfometuron-methyl (column 10, Table 1, Compound No. 63). '971' also teaches sodium and ammonium phosphates and sodium and potassium carbonates as optional additives/anticaking additive/gas generating agents (column 14, lines 24-26 and 39-40). '971' further teaches conventional methods for preparing water-dispersible granule compositions which includes **the extrusion of a water-wet paste** (column 3, lines 59-62). The step of sifting the dried extrudate is not disclosed sifting is a step commonly used in processes in order to remove excess dusts and products that are too small in

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size for retail purposes and '971' teaches that the granules have uniform size (column 1, lines 20-22).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

'971' does not teach the sulfonamides thifensulfuron-methyl and tribenuron-methyl. However, various other sulfonamides are taught such as, bensulfuron methyl, chlorimuron ethyl and chlorsulfuron (See Table 1, Compounds 4, 9 and 11, column 6) and Sandall et al. discloses that one or more active ingredients, including herbicides, may be used in combination with other herbicidally active ingredients. Furthermore, the addition of a saccharide is not disclosed, particularly a disaccharide. It is for this reason that Sandall (herein '157') is joined.

'157' teaches compositions comprising one or more active ingredients selected from sulfonylurea class of herbicides including sulfometuron methyl, thifensulfuron-methyl, tribenuron-methyl (column 2, lines 15-17; column 4, lines 10-12; Examples 14, 15, 20 and 21). The disaccharide, lactose is also taught as a water soluble diluent which dissolve rapidly in water (column 6, line 65 thru column 7, line 3).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to prepare the composition by water wet extrusion as taught by '971'. In view of KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) it would have been obvious to try adding water to soften the paste instead of heating it since it would require less energy than heating and is a common method of extrusion. One would have been motivated to formulate a water wet paste by extrusion of a water wet paste when preparing compositions at elevated temperature is not desired.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' and '157' to further include thifensulfuron-methyl and tribenuron methyl. One would have been motivated to include these sulfonylureas because they have a similar core structure to sulfometuron methyl and would be expected to perform similarly as an herbicide.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' and '157' to further include a disaccharide, such as lactose. One would have been motivated to include lactose because '157' teaches that saccharides such as lactose would aid in the dispersion of the product upon contact with water.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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